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AMENDMENTS TO THE CLAIMS:

1. (Currently Amended) A method for fabricating a silicide for a semiconductor device, said method comprising:

depositing a metal containing silicon ~~or a metal alloy~~ on a silicon substrate;

reacting said metal containing silicon ~~or said alloy~~ to form a first silicide phase;

etching any unreacted metal containing silicon ~~or alloy~~;

depositing a silicon cap layer over said first silicide phase;

reacting the silicon cap layer to form a second silicide phase, for said semiconductor device; and

etching any unreacted silicon from said silicon cap layer.

2. (Original) The method of claim 1, wherein said substrate comprises a bulk silicon substrate.

3. (Original) The method of claim 1, wherein said substrate comprises a silicon-on-insulator (SOI) substrate.

4. (Currently Amended) A method for fabricating a silicide for a silicon region, said method comprising:

depositing a metal containing silicon ~~or a metal alloy~~ on a bulk silicon substrate;

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reacting said metal containing silicon ~~or said alloy~~ to form a first silicide phase;
etching any unreacted metal containing silicon ~~or alloy~~;
depositing a silicon cap layer over said first silicide phase;
reacting the silicon cap layer to form a second silicide phase; and
etching any unreacted silicon from said silicon cap layer.

5. (Previously Presented) The method of claim 4, wherein said depositing of said metal containing silicon comprises performing a blanket deposition, wherein said metal comprises one of Co and Ti.

6. (Original) The method of claim 5, wherein said blanket deposition includes cobalt having a film thickness in a range of approximately 7 nm to approximately 8 nm.

7. (Previously Presented) The method of claim 6, wherein said blanket deposition is followed by a TiN cap deposition for preventing oxidation during a subsequent anneal processing.

8. (Currently Amended) The method of claim 4, wherein said reacting of said metal containing silicon ~~or said alloy~~ comprises performing a first rapid thermal anneal (RTA) to form a metal-silicon phase, such that the deposited metal containing silicon with the underlying bulk silicon substrate, converts some of the Si into metal-Si,

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wherein said etching comprises selectively etching any unreacted metal, thereby leaving the metal-silicon regions intact,

wherein said depositing comprises performing a blanket deposition of a silicon film, and

wherein said reacting of said silicon cap comprises performing a second RTA to form a metal di-silicide.

9. (Canceled)

10. (Currently Amended) A method for fabricating a silicide for a silicon region, said method comprising:

depositing a metal ~~or a metal alloy~~ on a bulk silicon substrate;

reacting said metal ~~or said alloy~~ to form a first silicide phase;

etching any unreacted metal ~~or alloy~~;

depositing a silicon cap layer over said first silicide phase;

reacting the silicon cap layer to form a second silicide phase; and

etching any unreacted silicon from said silicon cap layer,

wherein said metal is co-deposited with silicon.

11. (Original) The method of claim 10, wherein said metal is cobalt, and a mixture co-deposited is $\text{Co}_{1-x}\text{Si}_x$, with $x < 0.3$.

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12. (Original) The method of claim 4, wherein said method forms a raised source-drain structure by a blanket deposition which uses processing other than epitaxial processing.

13. (Currently Amended) A method for fabricating a silicide, said method comprising:
providing a substrate having a silicon layer;
depositing a metal containing silicon ~~or a metal alloy~~ over said silicon layer;
reacting said metal containing silicon ~~or said alloy~~ to form a first silicide phase;
etching any unreacted metal containing silicon ~~or alloy~~; and
depositing a silicon cap layer over said metal containing silicon ~~or said alloy~~;
reacting the silicon cap layer, to form a second silicide phase; and
etching any unreacted silicon from said silicon cap layer.

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

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22. (Canceled)

23. (Previously Presented) The method of claim 1, wherein said first silicide phase comprises the first forming silicide phase.

24. (Previously Presented) The method of claim 4, wherein said first silicide phase comprises the first forming silicide phase.

25. (Currently Amended) A method for fabricating a silicide for a semiconductor device, said method comprising:

depositing a metal containing silicon ~~or a metal alloy~~ on a silicon substrate;

reacting said metal containing silicon ~~or said alloy~~ to form a first forming silicide phase;

etching any unreacted metal containing silicon ~~or alloy~~;

depositing a silicon cap layer over said first forming silicide phase;

reacting the silicon cap layer to form a second silicide phase, for said semiconductor device; and

etching any unreacted silicon from said silicon cap layer.

26. (Currently Amended) A method for fabricating a silicide for a silicon region, said method comprising:

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depositing a metal containing silicon ~~or a metal alloy~~ on a bulk silicon substrate;
reacting said metal containing silicon ~~or said alloy~~ to form a first silicide phase;
etching any unreacted metal containing silicon ~~or alloy~~;
depositing a silicon cap layer over said first silicide phase;
reacting the silicon cap layer to form a second phase; and
etching any unreacted silicon from said silicon cap layer,
wherein said metal is nickel.

27. (Previously Presented) The method of claim 1, wherein said first silicide phase comprises a metal-rich phase.

28. (Currently Amended) The method of claim 1, wherein said depositing said metal containing silicon ~~or said metal alloy~~ is for extending a temperature window in which a silicide metal-rich phase exists.

29. (Previously Presented) The method of claim 4, wherein said first silicide phase comprises a metal-rich phase.

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30. (Currently Amended) The method of claim 4, wherein said depositing said metal containing silicon ~~or said metal alloy~~ is for extending a temperature window in which a silicide metal-rich phase exists.

31. (Previously Presented) The method of claim 10, wherein said first silicide phase comprises a metal-rich phase.

32. (Currently Amended) The method of claim 10, wherein said depositing said metal containing silicon ~~or said metal alloy~~ is for extending a temperature window in which a silicide metal-rich phase exists.

33. (Previously Presented) The method of claim 13, wherein said first silicide phase comprises a metal-rich phase.

34. (Currently Amended) The method of claim 13, wherein said depositing said metal containing silicon ~~or said metal alloy~~ is for extending a temperature window in which a silicide metal-rich phase exists.

35. (Previously Presented) The method of claim 25, wherein said first forming silicide phase comprises a metal-rich phase.

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36. (Currently Amended) The method of claim 25, wherein said depositing said metal containing silicon ~~or said metal alloy~~ is for extending a temperature window in which a silicide metal-rich phase exists.

37. (Previously Presented) The method of claim 26, wherein said first silicide phase comprises a silicon-rich phase.

38. (Currently Amended) The method of claim 26, wherein said depositing said metal containing silicon ~~or said metal alloy~~ is for extending a temperature window in which a silicide metal-rich phase exists.